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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/814,365
Filing Date: March 31, 2004
Appellant(s): KHAN ET AL.

Brian Hoffman

For Appellant

EXAMINER'S ANSWER

This is in response to the Appeal Brief filed July 14, 2008, appealing from the Office action mailed February 19, 2008.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings, which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

7,007,085	Malik	03-2002
6,112,203	Bharat	04-1998
7,162,473	Dumais	06-2003
6,961,954	Maybury	03-1998

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1,3-7,10-11,15,19-20,22-27,30,36-38, and 40-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Malik (US Patent No. 7,007,085) filed March 29, 2002, in view of Bharat (US Patent No. 6,112,203) filed April 9, 1998, and further in view of Dumais (US Patent No. 7,162,473) filed June 26, 2003.

Regarding Claims 1,15,19,20,30, and 36, Malik discloses a computer-implemented method for providing search results to a user, the method comprising:

determining a list of named entities within a data store on a user's computer (column 8, lines 21-34, Malik);

identifying an event wherein the event comprises a user interaction with an article on the user's computer (column 9, lines 36-40, Malik);

identifying a plurality of named entities within the event (Fig.2; column 9, lines 40-54, Malik). However, Malik is silent with respect to determining a weight to associate with each of the plurality of named entities based at least in part on a frequency of each of the plurality of named entities within the data store. On the other hand, Bharat discloses determining a weight to associate with each of the plurality of named entities based at least in part on a frequency of each of the plurality of named entities within the data store (column 7, lines 10-39, Bharat). Malik and Bharat are analogous art because they are from the same field of endeavor of the management of information. It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate Bharat's teachings into the Malik system. A skilled artisan would have been

motivated to combine as suggested by column 5, lines 31-37, in order to selectively perform content analysis, so that only information that represents the most influential documents are considered in the outcome. As a result, reducing the effect of unrelated information and allowing for a meaningful ranking of results to be presented to the user in a timely manner. Therefore, the combination of Malik in view of Bharat, disclose responsive to determining the weight to associate with each of the plurality of named entities, creating a search query based at least in part on the plurality of named entities and the associated weight (column 4, lines 37-40, and column 5, lines 21-30, Bharat), the search query focused on a named entity with a higher associated weight more than on a named entity with a lower associated weight (column 6, lines 1-28, Bharat). However, Malik and Bharat are silent with respect to the query being an automatic implicit query. On the other hand, Dumais discloses automatically creating an implicit query (column 5, lines 29-31, Dumais). It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate Dumais' teachings into the Malik and Bharat system. A skilled artisan would have been motivated to combine in order to provide a more intelligent and technology savvy search engine, thus introducing a reuse system enables users to find and retrieve previous information in a more efficient manner. Therefore, the combination of Malik in view of Bharat, and further in view of Dumais, disclose responsive to creating the implicit search query, retrieving from the user's computer a plurality of search results relevant to the search query (column 12, lines 29-38, Dumais); and displaying the retrieved plurality of search results (column 12, lines 38-45, Dumais).

Regarding Claims 3 and 22, the combination of Malik in view of Bharat, and further in view of Dumais, disclose the method wherein identifying a plurality of named entities within the event comprises identifying an entity in the event that matches an entity in the list of named entities (column 14, lines 33-53, Malik).

Regarding Claims 4 and 24, the combination of Malik in view of Bharat, and further in view of Dumais, disclose the method wherein determining the list of named entities comprises monitoring instant messaging traffic (column 8, lines 14-20, Malik).

Regarding Claims 5 and 25, the combination of Malik in view of Bharat, and further in view of Dumais, disclose the method wherein determining the list of named entities comprises analyzing an email data store (column 8, lines 14-20, Malik).

Regarding Claims 6 and 26, the combination of Malik in view of Bharat, and further in view of Dumais, disclose the method wherein determining the list of named entities comprises analyzing a directory structure (column 12, lines 44-61, Malik).

Regarding Claims 7 and 27, the combination of Malik in view of Bharat, and further in view of Dumais, disclose the method wherein determining the list of named entities comprises searching a contact list (column 12, lines 44-61, Malik).

Regarding Claim 10, the combination of Malik in view of Bharat, and further in view of Dumais, disclose the method wherein the named entity comprises one of an email address, an instant messaging name, and a proper noun (Fig.2; column 8, lines 14-34, Malik).

Regarding Claims 11 and 23, the combination of Malik in view of Bharat, and further in view of Dumais, disclose the method further comprising storing the named entity in a user profile (column 11, lines 38-63, Malik).

Regarding Claims 37 and 40, the combination of Malik in view of Bharat, and further in view of Dumais, disclose the method wherein the frequency of each named entity comprises an inverse document frequency of that named entity within the data store (column 7, lines 10,33, Bharat).

Regarding Claims 38 and 41, the combination of Malik in view of Bharat, and further in view of Dumais, disclose the method Wherein the frequency of each named entity comprises a term frequency of that named entity within the data store (column 7, lines 25-31, Bharat).

3. **Claims 8-9,12-13,16,28-29, and 31-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Malik (US Patent No. 7,007,085) filed March 29, 2002, in view of Bharat (US Patent No. 6,112,203) filed April 9, 1998, further in view of**

Dumais (US Patent No. 7,162,473) filed June 26, 2003, and further in view of Maybury (US Patent No. 6,961,954) filed March 2, 1998.

Regarding Claims 8 and 28, the combination of Malik in view of Bharat, and further in view of Dumais, disclose all of the claimed subject matter as stated above. However, the combination of Malik in view of Bharat, and Dumais are silent with respect to the list of named entities comprises searching a news list On the other hand, Maybury discloses searching a news list (column 16, lines 48- 50, Maybury). It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate Maybury's teachings into the Malik, Bharat, and Dumais system. A skilled artisan would have been motivated to combine as suggested by Maybury at column 2, lines 41-53, in order to automatically summarize data representative of news information so that it may be visualized and searched in a manner which is compatible with popular browsing tools.

Regarding Claims 9 and 29, the combination of Malik in view of Bharat, further in view of Dumais, and further in view of Maybury, disclose the method wherein determining the list of named entities comprises part of speech tagging (columns 10-11, lines 55-67 and 1-3, respectively, Maybury).

Regarding Claims 12 and 32, the combination of Malik in view of Bharat, further in view of Dumais, and further in view of Maybury, disclose the method further

comprising identifying a plurality of named entities for a name by using first name only, last name only, and combinations thereof (Fig. 18; column-18, lines 4-9, Maybury).

Regarding Claims 13 and 33, the combination of Malik in view of Bharat, further in view of Dumais, and further in view of Maybury, disclose the method further comprising filtering out at least one of the plurality of named entities having a high document frequency (DF) (column 16, lines 50-57, Maybury).

Regarding Claims 16 and 31, the combination of Malik in view of Bharat, further in view of Dumais, and further in view of Maybury, disclose the method further comprising:

receiving an interest signal associated with one of the plurality of named entities (column 16, lines 62-65, Maybury); and

ranking the result set based at least in part on the interest signal (column 16, lines 65-67, Maybury).

(10) Response to Argument

Definition of Term within the claim language:

Named entity: A named entity is a term, phrase, or other identifier that has been noted as being relevant to the user. For instance, a named entity may comprise the name of a person to which the user recently directed an email. Or a named entity may comprise the name or email address of anyone that the user has communicated with (see paragraph [0031] of the instant application). Named entities may also comprise common terms or phrases of interest to the user (see paragraph [0033] of the instant application). Other named entities may include proper names, capitalized words, terms used as explicit queries by the user, directories commonly used by the user, the names of files commonly used, terms contained in a to do list, terms in a contacts list, terms used in the subject header of recent emails, all emails, or emails from particular persons such as persons the user commonly interacts with or persons that the user works with. Other

examples include terms used in the text of anchors pointing towards pages that the user views, or terms in the title and headers of pages that the user views (see paragraph [0034] of the instant application).

Appellant argues, Malik does not disclose “responsive to determining the weight to associate with each of the plurality of named entities, automatically creating an implicit search query based at least in part on the plurality of named entities and the associated weight, the implicit search query focused on a named entity with a higher associated weight more than on a named entity with a lower associated weight”.

Examiner respectfully disagrees. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). In particular, with reference to Malik not teaching the claimed “responsive to determining the weight to associate with each of the plurality of named entities, automatically creating an implicit search query based at least in part on the plurality of named entities and the associated weight, the implicit search query focused on a named entity with a higher associated weight more than on a named entity with a lower associated weight”, the primary reference Malik was not relied upon for the disclosure of such feature (see rejection above). However, the combination of Malik in view of Bharat, and further in view of Dumais, were relied upon for the disclosure of the claimed invention.

Appellant argues, Bharat does not give a hint, mention, or teaching of automatically creating an implicit search query based at least in part on the plurality of named entities and the *associated weight*, nor any hint, mention, or teaching of the implicit search query focused on a named entity with a higher associated weight more than on a named entity with a lower associated weight.

Examiner respectfully disagrees. Again, in response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). In particular, the appellant seems to be arguing that Bharat does not teach the feature of "automatically creating an implicit search query", however, as can be seen within the rejection above Bharat was not relied upon for the disclosure of an implicit search query and specifically "automatically creating an implicit search query". As can be seen from the rejection above, it is a combination of references that are used in order to disclose the above-argued features. Bharat was however relied upon for teaching 'creating a search query based at least in part on the plurality of named entities and the associated weight', along with 'the search query focused on a named entity with a higher associated weight more than on a named entity with a lower associated weight'. Specifically, Bharat teaches "*Because the query topic Q 245 can include a large number of terms...we prefer to use term frequency weighting. More specifically, we use cosine normalization in weighting both the query topic Q and the pages P because the deviation in term vector lengths is large...For IDF weights, we measured frequency of occurrence of*

terms in a collection of 400,000 Yahoo! documents, see "http://www.yahoo.com". We boost the weights of terms i that appear in the original user query 111 by a factor K , for example three. Specifically, if term i is a term in the user query 111, then: Once similarity weights have been assigned for the nodes in the selected set, nodes falling below the threshold can be pruned to produce a pruned graph" (see col.7, lines 10-39), wherein the preceding excerpt discusses that there are weights given to terms which appear in original or previous queries dependent upon the frequency, and it is understood within the art that the calculated weights are stored/used for later usage by other queries which are submitted through a search engine. This is proven by Bharat at column 4, lines 9-29 and column 5, lines 21-30, wherein the search engine maintains an index of web pages in a memory, in response to a query and those terms within the query are maintained as well along with the associated weights. Lastly, Bharat teaches "using the relevance weights of all the nodes to decide whether or not to eliminate a page for user consideration. For example, prune all nodes whose relevance weight is below a predetermined threshold. The threshold can be picked in a number of ways, for example, a fixed fraction (one tenth) of the largest relevance weight, the highest quartile (top 25%), etc." and "select only a small number of nodes to form the sub-set of nodes, and only match pages represented in the selected sub-set with the query topic Q. Those with relevance weights below a threshold are removed from the graph" (see col.6, lines 1-39). The preceding excerpt discloses how the top percentile or those pages which have weights above a predetermined threshold (i.e. higher associated weight) are focused on more so than the lower weights, thereby meeting the claim language as argued above.

Appellant argues, Dumais does not give a hint, mention, or suggestion of determining a weight to associate with each of a plurality of named entities,

therefore it logically follows that Dumais does not disclose "automatically creating an implicit search query based at least in part on the plurality of named entities and the associated weight".

Examiner respectfully disagrees. Again, in response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references.

See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). More specifically, Dumais was incorporated into the Malik and Bharat systems in order to disclose the feature of "automatically creating an implicit query" (see rejection above). To begin, an implicit search query is an 'implied search query', which means that the user does not explicitly enter terms into a query. As such, Dumais teaches "*A search component 150 is provided that receives a user query 154 for information items contained in the content index 140...For example, the user may query for "items relating to last years performance review," wherein the search component 150 extracts items from the content index 140 such as emails, coworker evaluations, documents published in the last year, web page images, audio recordings and so forth relating to the context of the query 154. In another example, an implicit query may be derived from the query 154 (e.g., whenever I get a phone call from this person, pull-up last five e-mails from this person)*" (see col.5, lines 18-31). The preceding excerpt introduces the use of an implicit search query based on an initial query entered by the user (i.e. explicit search query), wherein the step of the system pulling up the last five e-mails from that person when a call is received corresponds to the implicit search query (because the user themselves did not initiate or enter a query in order to get the additional information, the query was created and produced automatically). Also,

Dumais further explains "*the present invention supports explicit queries 610 and/or implicit queries 614. Explicit queries 610 are directed by the user to find information of interest (e.g., show all data references relating to a meeting or date). Implicit queries 614 can in some cases be derived from the explicit query 610. For example, a user could have their desktop phone messages linked to their e-mail system or other message system. If a phone call were to arrive from selected individuals, the e-mail system could automatically retrieve e-mail relating to the individual via implicit query 614. In another example, at a predetermined interval before an upcoming meeting, the user's calendar system could trigger queries to recall data from past meetings or information relating to individuals attending the upcoming meeting. Also, implicit queries 614 may be generated based upon reasoning processes associated with the user's current context or query (e.g., a query composed of important words in recently read paragraphs)*" (see col.12, lines 26-45). The preceding excerpt teaches automatically retrieving e-mail messages associated with a phone call being arrived from an individual (i.e. named entity), thus further showing the use of automatically creating an implicit query. Lastly, while Dumais was not relied upon for the teaching of determining a weight to associate with a plurality of named entities, Dumais does teach the use of ranking the search results and dependent upon the rank is how the results are sorted (see col.8, lines 4-25). Fig.3 of Dumais also illustrates the use of the rank category and it shows how the ranking is given a ranking number (i.e. weight) for relevance. Therefore, the combination of Malik in view of Bharat, and further in view of Dumais disclose the claimed invention.

Appellant argues, Maybury does not give a hint, mention, or suggestion of "responsive to determining the weight to associate with each of the plurality of named entities, automatically creating an implicit search query based at least in

part on the plurality of named entities and the associated weight, the implicit search query focused on a named entity with a higher associated weight more than on a named entity with a lower associated weight”.

Examiner respectfully disagrees. Again, in response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). In particular, with reference to Maybury not teaching the claimed “responsive to determining the weight to associate with each of the plurality of named entities, automatically creating an implicit search query based at least in part on the plurality of named entities and the associated weight, the implicit search query focused on a named entity with a higher associated weight more than on a named entity with a lower associated weight”, Maybury was not relied upon for the disclosure of such feature (see rejection above). The appellant has acknowledged that Maybury was applied to only the dependent limitations in the claims (see pg. 9, 2nd full paragraph of Appeal Brief). However, the combination of Malik in view of Bharat, and further in view of Dumais, were relied upon for the disclosure of the claimed invention.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,
CLD
September 9, 2008

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